

# Interest Rate Swap and Variable Rate Debt Programs

Managing On-Going Responsibilities  
California Debt and Investment Advisory Commission  
April 11, 2008

## ***Swap Financial Group***

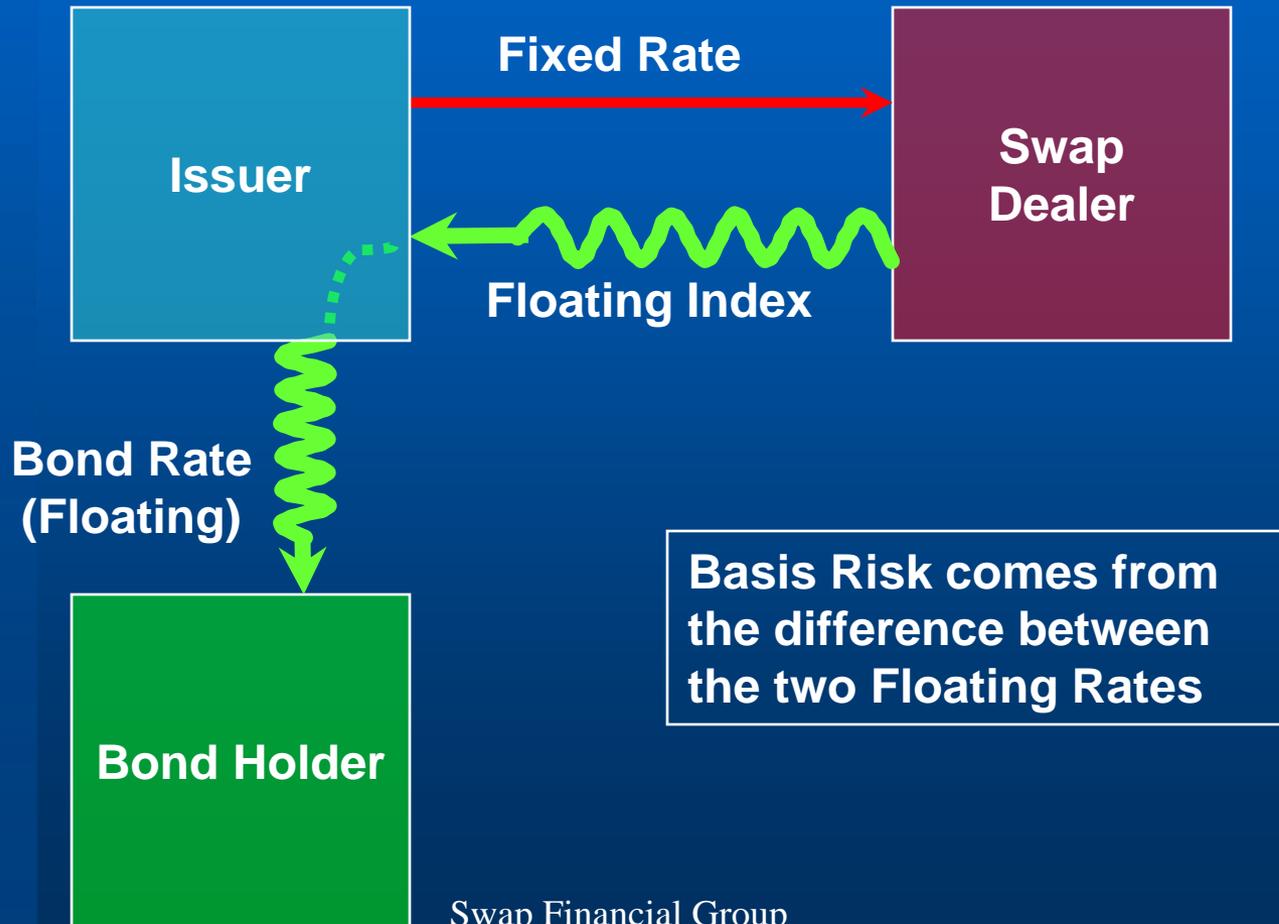
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# Agenda

- **What do you need to know to maintain a variable rate program?**
- **How do actual rates compare to market-wide indexes?**
- **What factors influence actual rates?**
- **How does the market value of a swap change over time?**

# Review of swap structure



# Swap indexes

- The floating side of a swap is usually an index
- Two important floating indexes are:
  - **LIBOR** (London Interbank Offered Rate): Dominant index for taxable floating rates
  - **SIFMA** (Securities Industry and Financial Markets Association Municipal Swap Index, formerly the BMA Index): Dominant index for tax-exempt floating rates
- Indexes are never exactly equal to actual rates

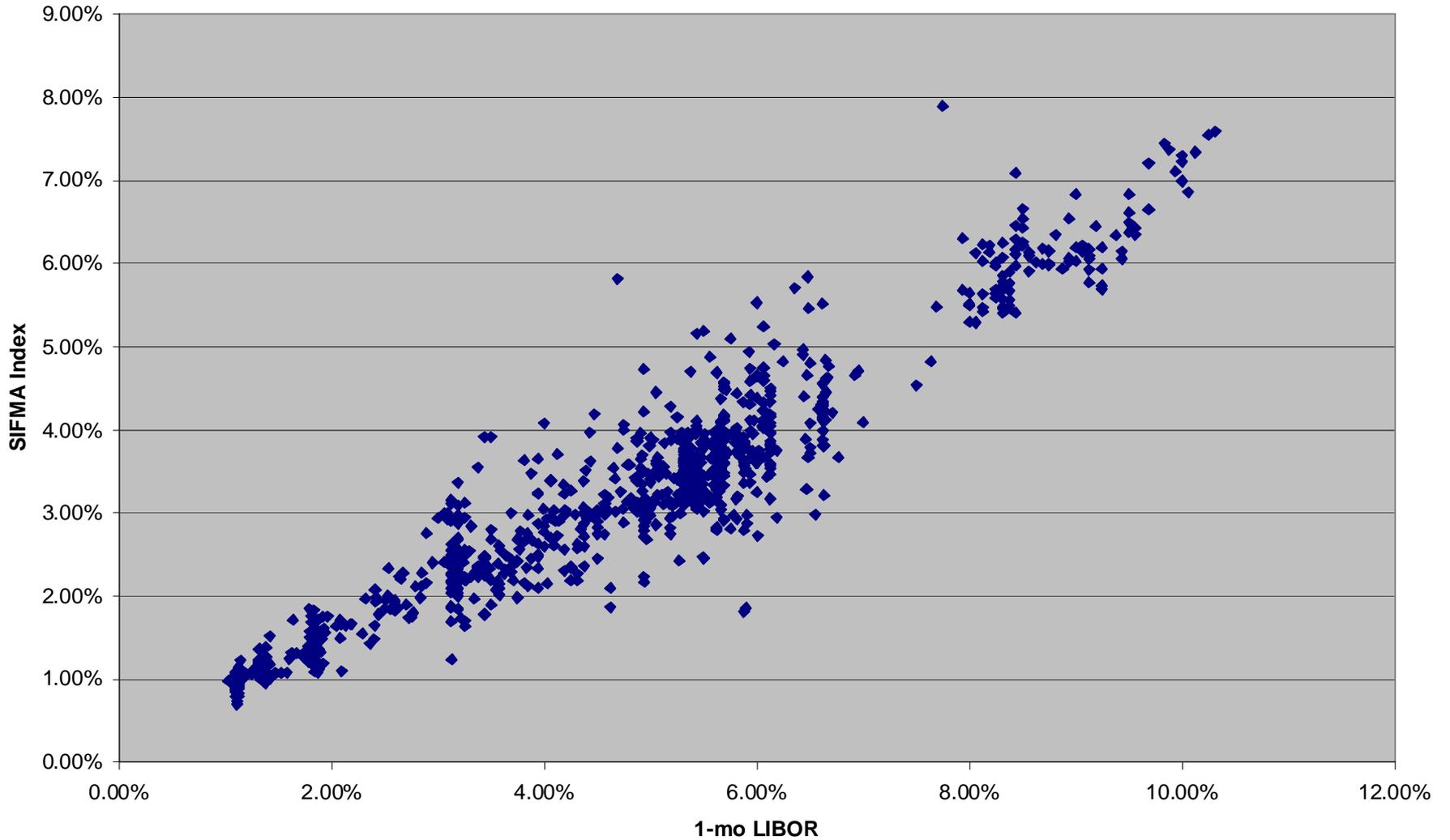
# How does LIBOR work?

- **LIBOR is a rate, set once a day at 11 AM London Time by the British Bankers Association**
- **Every major currency**
- **Every short-term maturity (overnight to one year)**
- **Reflects short-term lending rates between highly creditworthy banks**

# How does SIFMA work?

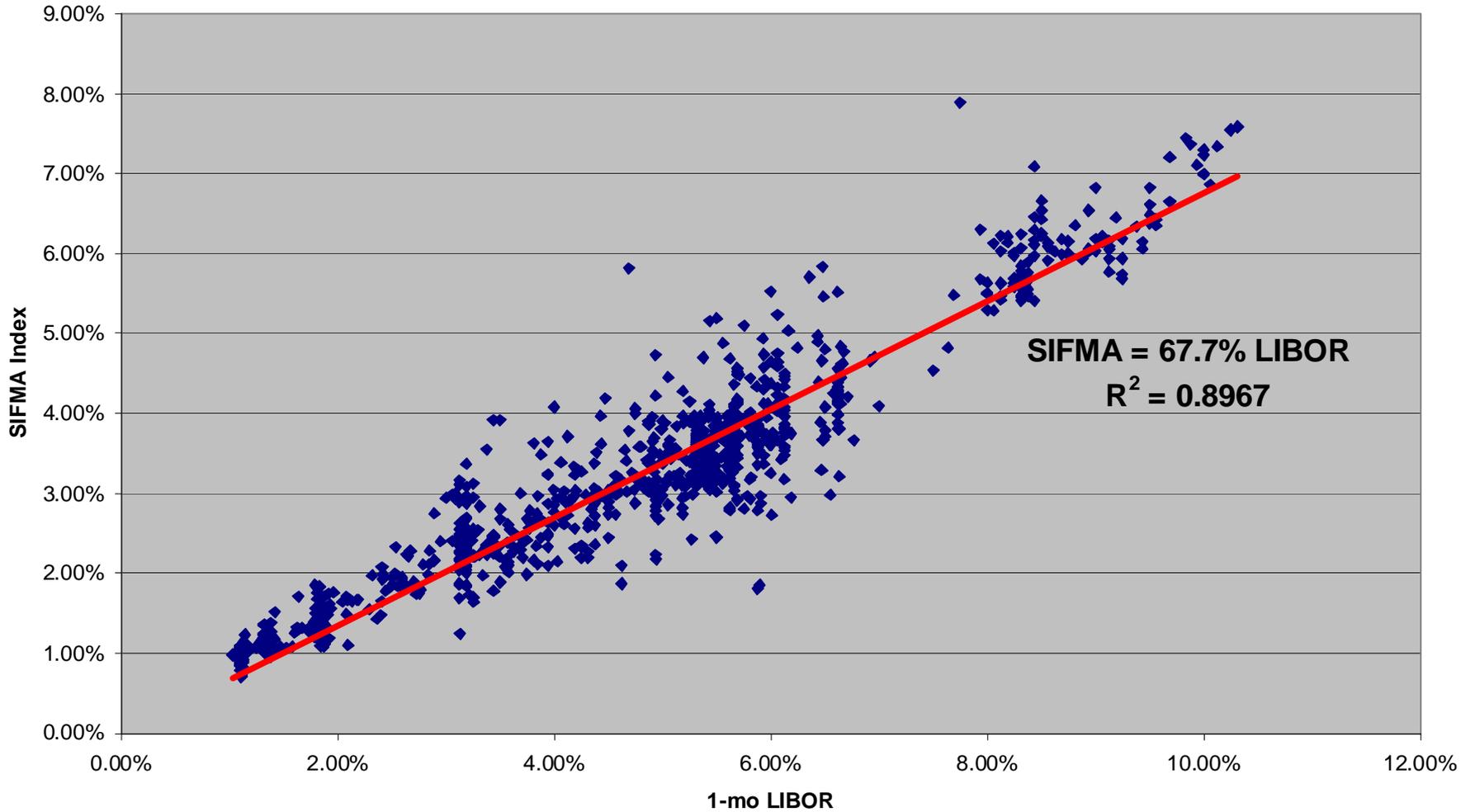
- **SIFMA is a literal arithmetic average of actual tax-exempt VRDO programs**
- **Mathematically rigorous, determined once a week by MMD Inc.**
- **Reflects multiple remarketing agents, liquidity banks**
- **Only creditworthy programs**
- **2008 problem: Tainted insurers**

# SIFMA vs LIBOR, weekly since 1989



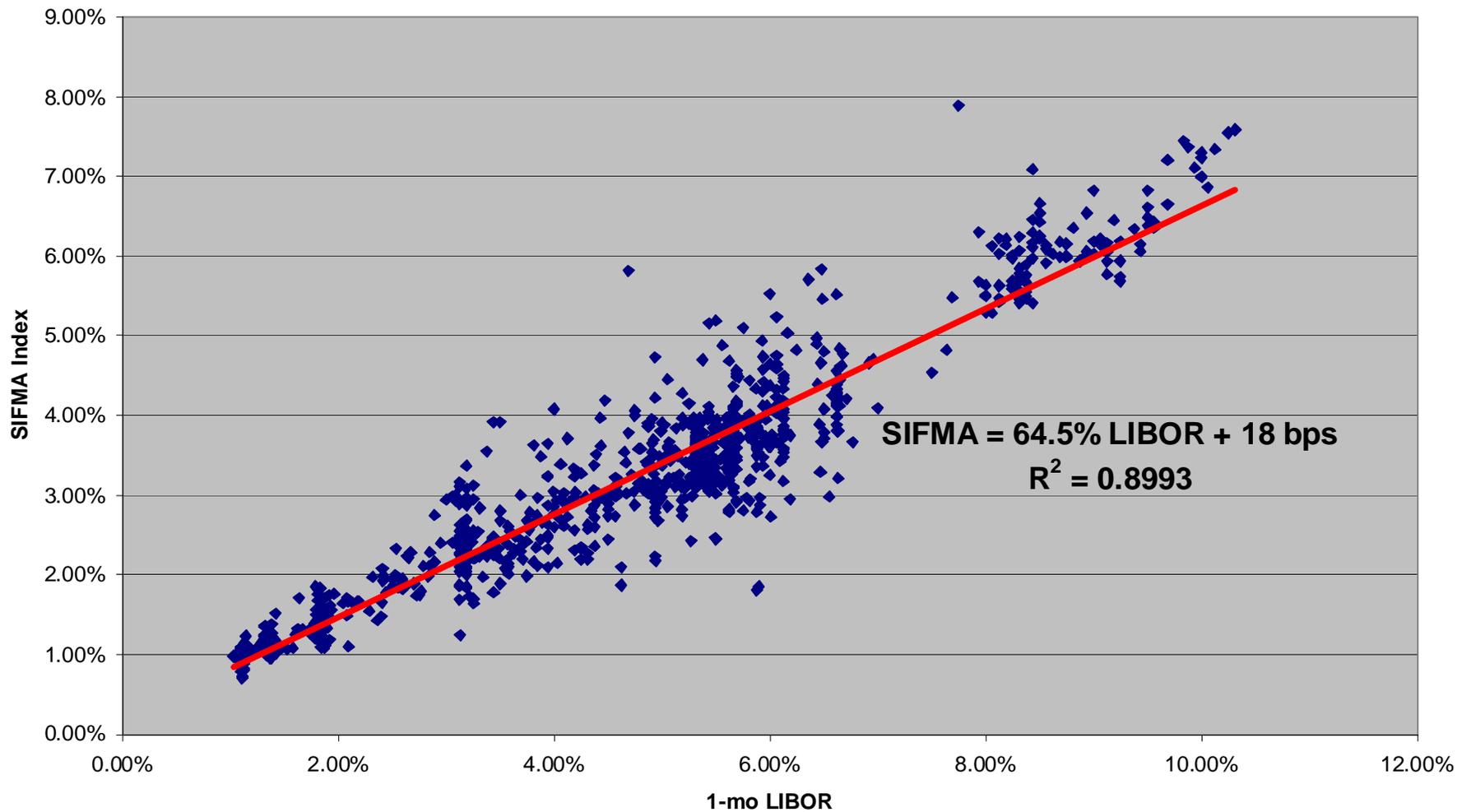
# SIFMA vs LIBOR, weekly since 1989

## With 'Best Fit' Line, Simple Formula

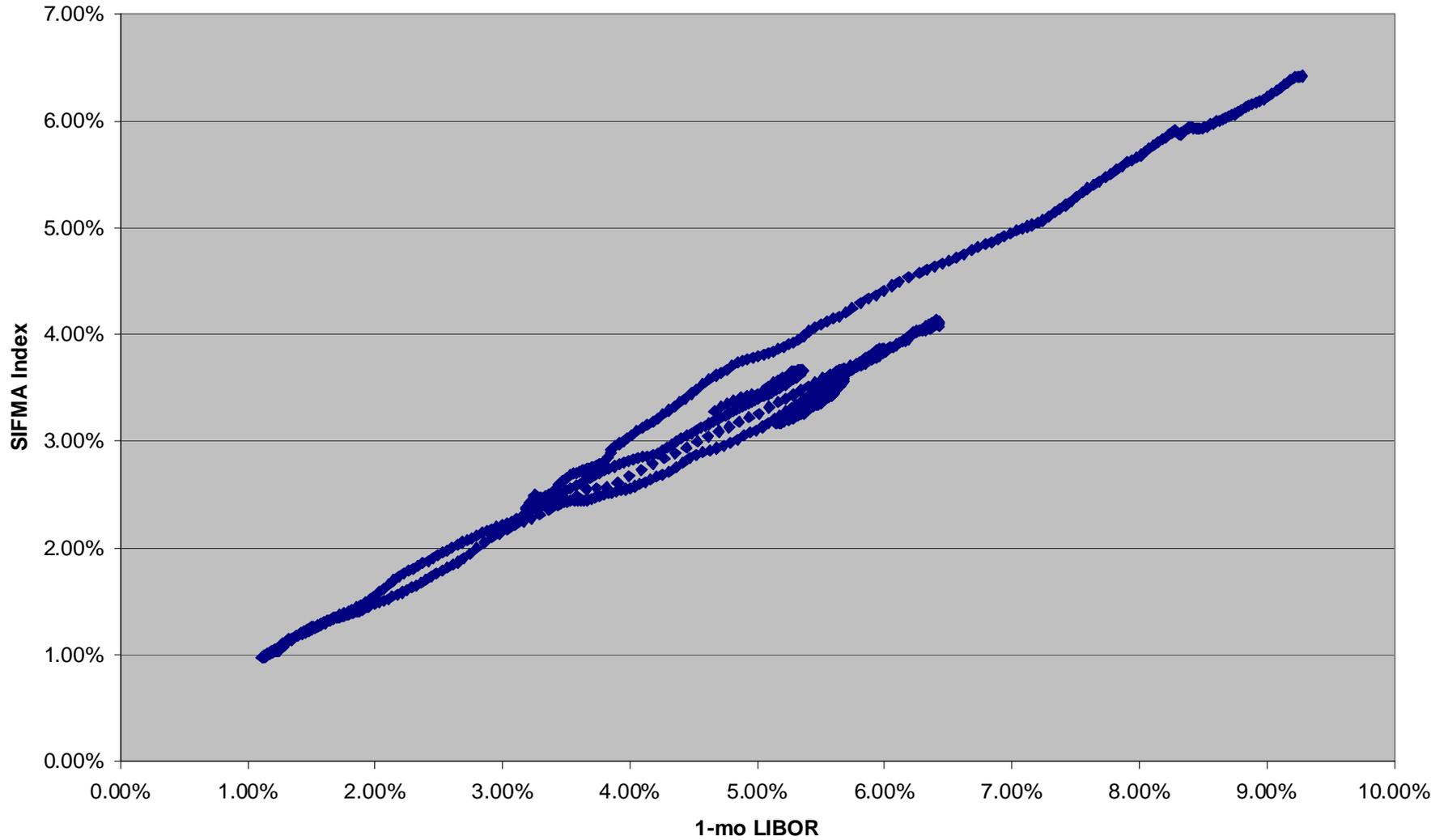


# SIFMA vs LIBOR, weekly since 1989

## With 'Best Fit' Line, Compound Formula

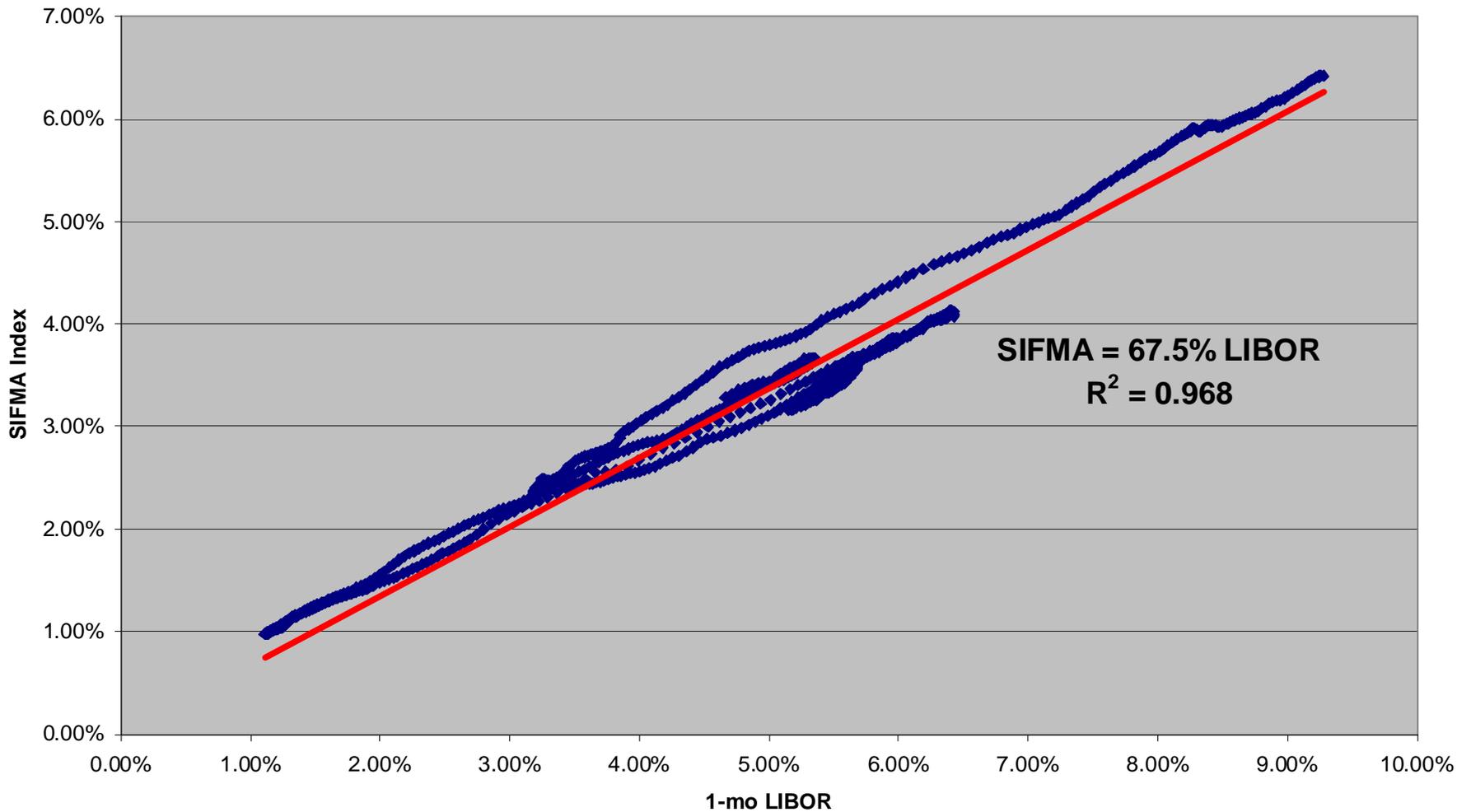


## SIFMA vs LIBOR, annualized since 1989

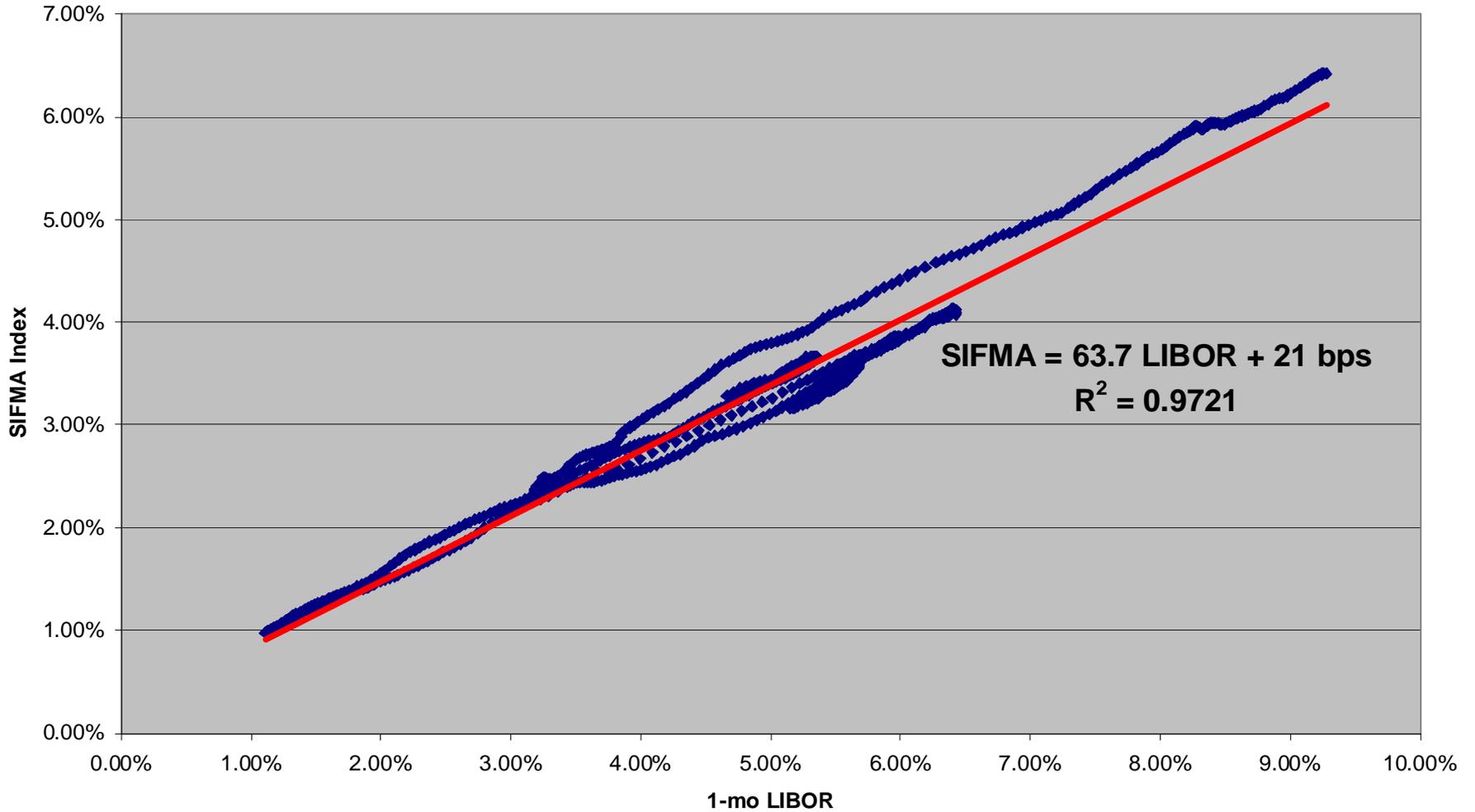


# SIFMA vs LIBOR, annualized since 1989

## With 'Best Fit' line, Simple Formula

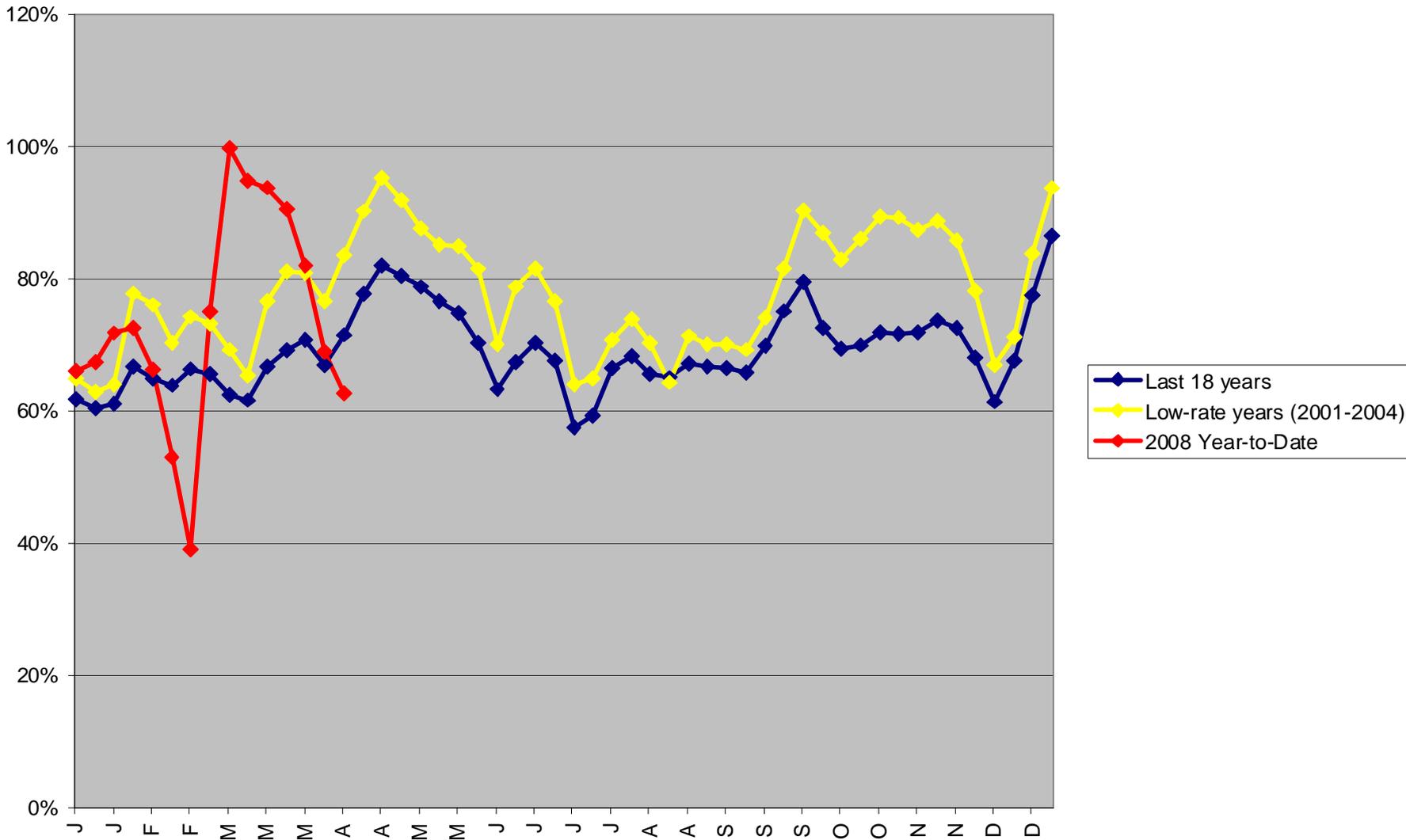


**SIFMA vs LIBOR, annualized since 1989**  
**With 'Best Fit' line, Simple Formula**



# SIFMA-LIBOR relationship is highly seasonal

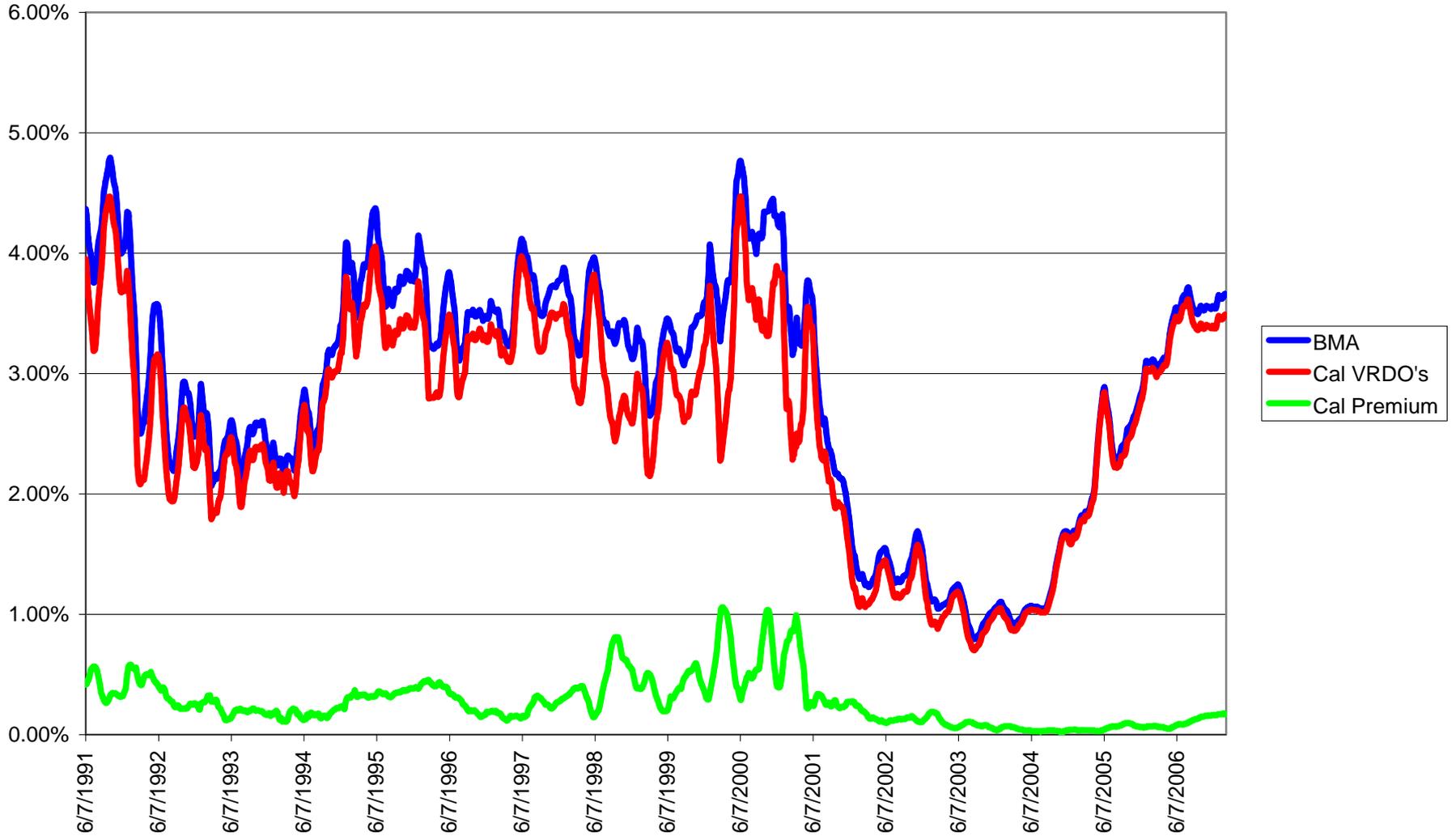
SIFMA as Percentage of LIBOR



# Why bonds vary from SIFMA

- **California – “Specialty State”**
  - Double tax-exemption
  - Big base of dedicated investors
  - “The California Premium”
- **Daily VRDO’s**
- **Auction Rate Securities**
  - Non-puttable, 90% insured
  - Bond insurer crisis, liquidity crisis
  - Market seized up this year
  - Will it ever come back?

### BMA vs Cal VRDO's Since 1991



# How a swap changes in value

- **Like a fixed-rate bond, a swap changes in value over time**
- **Swap value changes based on three factors:**
  1. **Changes in interest rates**
  2. **Remaining years to maturity**
  3. **Amortization**

# Understanding valuation changes

- **If you are a fixed-rate payer, if rates have risen, the value will be positive to you (and vice versa)**
- **Higher rates mean the swap provider would pay you to get out of the swap (he could find a higher-paying swap in the current market)**
- **GASB rules require you to provide information on the current value of your swaps**
- **New rules will take effect in 2010 that will require more thorough reporting, “effectiveness testing”**